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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/821,180	03/28/2001	Brian J. Misek	10010214-1	4013

22878 7590 09/21/2004

AGILENT TECHNOLOGIES, INC.  
INTELLECTUAL PROPERTY ADMINISTRATION, LEGAL DEPT.  
P.O. BOX 7599  
M/S DL429  
LOVELAND, CO 80537-0599

EXAMINER
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DINH, DUC Q

ART UNIT	PAPER NUMBER
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2674

DATE MAILED: 09/21/2004

10

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/821,180

Applicant(s)

MISEK ET AL.

Examiner

DUC Q DINH

Art Unit

2674

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 9.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date: \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arrigo et al. (6,781,570), hereinafter Arrigo, in view of Van Brocklin et al. (U. S. Patent No. 6,552,713), hereinafter Van Brocklin.

In reference to claim 1, Arrigo discloses in Fig. 1a a circuit for an optical mouse comprising: an optical sensor 115, MCU 120 performs any necessary translation from input (e.g., converting mouse movement data into cursor position data...therefore the MCU inherently comprising an integrated Analog to Digital Converter for converting the Analog signal receiving from the sensor 105 into digital signal for processing in the MCU 120), the MCU 120 comprising RAM and ROM (col.4, line 49-col. 5, line 20). Arrigo disclose everything except unitary substrate for integrating sensor and the MCU on. Van Brocklin disclose an optical pointing device in which the optical sensor, the controller and other components of the mouse is integrated in a substrate (see Fig. 1, col. 6, lines 19-33).

It would have been obvious for one of ordinary skill in the art at the time of the invention was made to learn the teaching of Van Brocklin, i.e.: providing the integrated circuit package, in the device of Arrigo for an ergonomic input device technology that is reliable (col. 2, lines 13-14).

In reference to claims 2-8, Arrigo MCU 120 provides an environment for processing information and data provided by the likes of user interface 125 (corresponding to the hardware controller), optical sensor 115 and transceiver 130 (if applicable). MCU 120 can include, for example, a microprocessor or central processing unit (CPU corresponding to the digital signal processor) that is capable of executing instructions and algorithms for the likes of processing input data, for carrying out power management, and for providing data to transmitter 130. MCU 120 may also include (or have access to) other support functions such as additional CPUs random access memory (RAM), read only memory (ROM), non-volatile memory devices (e.g., electrically erasable programmable ROM or flash memory), I/O ports, timers, comparators, buffers, logic units and other specific support functions. MCU 120 can also be configured with an internal low power mode where its power consumption is reduced (e.g., from normal power consumption mode to low power consumption mode) in response to inactivity at its I/O ports (e.g., based on edge detection). Other equivalent processing environments suitable for running a real-time process can also be used in place of MCU 120 (e.g., a single board computer).

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **DUC Q DINH** whose telephone number is **(703) 306-5412**. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **RICHARD A HJERPE** can be reached on **(703) 305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**Or faxed to:**

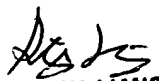
**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivery response should be brought to: Crystal Park II, 2121 Crystal Drive,  
Arlington, Va Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

DUC Q DINH  
Examiner  
Art Unit 2674

DQD  
September 15, 2004

  
**REGINA LIANG**  
**PRIMARY EXAMINER**